

EXECUTIVE SUMMARY

AIRCRAFT ACCIDENT INVESTIGATION

**F-16CM, T/N 88-0510
NEAR CERVIA, ITALY
28 JANUARY 2013**

On 28 January 2013, at approximately 1903 hours local time (L), an F-16CM, tail number 88-0510, assigned to the 510th Fighter Squadron, 31st Fighter Wing, Aviano Air Base (AAB), Italy, departed AAB as part of a formation of three F-16CM and one F-16DM aircraft engaged in a night training mission. The pilots were using night vision goggles (NVGs). Prior to the mishap, after airspace weather precluded them from achieving their primary mission, the mishap pilot (MP) and mishap wingman (MW) coordinated two simulated bomb attacks as a backup mission. The first attack, which did not include any simulated defensive threat reactions, was executed without event. At 1948L, approximately 45 minutes after takeoff, the MP executed a threat reaction which culminated in a “last ditch” defensive maneuver. This occurred during post-attack egress on the second attack and initially resulted in the mishap aircraft (MA) entering a 45 degree nose low, 90 degree left wing down, attitude. Approximately 12 seconds later, the MP transmitted he was spatially disoriented.

At the prompting of the MW to transition to internal aircraft instruments, the MP attempted a recovery maneuver. The execution of the “last ditch” maneuver and follow on recovery maneuvers resulted in aural warnings and caution lights illuminating inside the aircraft, loss of all cultural lighting cues and discernible horizon outside the aircraft, and unusual aircraft attitudes, which together led to a high rate of descent and airspeed. The MP was spatially disoriented to the point where he believed that he could not recover the MA. At approximately 19:49:24L, the MP initiated ejection. The MP suffered fatal head and neck trauma during ejection. The MA was destroyed upon impact in the Adriatic Sea, approximately four miles from the ejection site. The loss of the MA and its associated property is valued at \$28,396,157.42. There was no other damage to government or private property.

The Accident Investigation Board President found, by clear and convincing evidence, that the cause of the mishap was the MP’s failure to effectively recover from spatial disorientation, due to a combination of weather conditions, the MP’s use of NVGs, the MA’s attitude and high rate of speed, and the MP’s breakdown in visual scan. This led the MP to misjudge the imminent need to eject. The Board President also found, by clear and convincing evidence, that an immediate loss of the MP’s helmet upon the high-speed ejection, slack in the ejection seat harness, and a left yaw to the ejection seat as it left the MA, along with a 40 gravitational force snapback that followed the ejection seat’s drogue chute deployment, caused the MP’s injuries, which quickly resulted in his death.

Under 10 U.S.C. § 2254(d) the opinion of the accident investigator as to the cause of, or the factors contributing to, the accident set forth in the accident investigation report, if any, may not be considered as evidence in any civil or criminal proceeding arising from the accident, nor may such information be considered an admission of liability of the United States or by any person referred to in those conclusions or statements.